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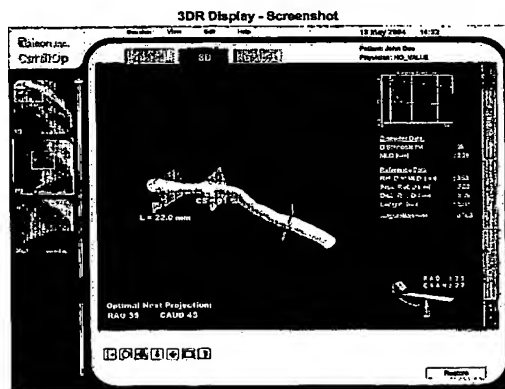
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR THREE-DIMENSIONAL RECONSTRUCTION OF A TUBULAR ORGAN



(57) Abstract: Embodiments of the present invention include methods and systems for three-dimensional reconstruction of a tubular organ (for example, coronary artery) using a plurality of two-dimensional images. Some of the embodiments may include displaying a first image of a vascular network, receiving input for identifying on the first image a vessel of interest, tracing the edges of the vessel of interest including eliminating false edges of objects visually adjacent to the vessel of interest, determining substantially precise radius and densitometry values along the vessel, displaying at least a second image of the vascular network, receiving input for identifying on the second image the vessel of interest, tracing the edges of the vessel of interest in the second image, including eliminating false edges of objects visually adjacent to the vessel of interest, determining substantially precise radius and densitometry values along the vessel in the second image, determining a three dimensional reconstruction of the vessel of interest and determining fused area (cross-section) measurements along the vessel and computing and presenting quantitative measurements, including, but not limited to, true length, percent narrowing (diameter and area), and the like.

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